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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,435	01/28/2005	Erich Klein	AT02 0049 US	1268
65913 7590 01/22/2007 NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER SAUNDERS JR, JOSEPH	
			ART UNIT	PAPER NUMBER
			2615	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/22/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/523,435

Applicant(s)

KLEIN ET AL.

Examiner

Joseph Saunders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5 and 6 is/are rejected.
- 7) ☒ Claim(s) 2, 3, and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant has made the appropriate correction to the specification to the disclosure and therefore the objection to the disclosure has been withdrawn.
2. In regards to the 35 USC § 112 rejections of claims 1 and 5, applicant has made the appropriate corrections and therefore the rejection has been withdrawn.
3. Applicant's arguments with respect to claims 1, 5, and 6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelly (4,507,800), hereinafter Kelly.

**Claim 1:** Kelly discloses an electroacoustic transducer (loudspeaker Figure 2) with a transducer axis (axis is not depicted, however would be perpendicular to diaphragm 26 and follow through the center of the speaker) and comprising a membrane (diaphragm 26), which membrane is arranged perpendicular to the transducer axis so as to be

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oscillatory, wherein the membrane includes an intermediate area (section of diaphragm 26 between inverted U-shaped section and the section where diaphragm 26 connects with cylinder 24) adjacent to a U-shaped peripheral area (inverted U-shaped section) and an annular securing area (section where diaphragm 26 connects with cylinder 24) adjacent to the intermediate area and a central area (section of diaphragm 26 within the cylinder 24) located within the annular securing area, said central area serves for sound generation (since this is a dome type loudspeaker the central part of the diaphragm serves for sound generation), and comprising a magnet system, which magnet system is equipped with two magnet-system components (ring shaped magnet 10 with ring shaped magnet top plate 12 and back plat/pole piece assembly 14), which magnet-system components bound an air gap (air gap 20), and comprising a moving coil (voice coil 22 mounted on cylinder 24), which moving coil is, in part, arranged in the air gap and is connected to the membrane (cylinder 24 connects to diaphragm 26), and comprising a circuit module (Figure 4), which circuit module is equipped with a circuit frame (mounting plate 62) and at least one circuit component of a transducer circuit (printed circuit board 58), mounted on the circuit frame, wherein the magnet system is arranged in an annular shape (ring shaped) and encloses an inner space, which inner space is accessible from outside the magnet system during production of the transducer and before the circuit module is mounted (inner space consists of the area, before pole piece assembly 14 is inserted during assembly, between the magnet 10 and extends from the diaphragm 26 to the bottom of the loudspeaker which is later sealed during assembly by the circuit module), and wherein the at least one circuit component is

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arranged on a first carrier surface of the circuit frame which first carrier surface faces the membrane (printed circuit board 58 is placed on the side of mounting plate 62 as to face diaphragm 26), and in the inner space of the magnet system (printed circuit board 58 would be located in the inner space as defined above).

**Claim 5:** Kelly discloses an electroacoustic transducer as claimed in claim 5, wherein the circuit module is of a design that can be removed without separate tools (bayonets 68 are used to lock housing 30 to mounting plate 62).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly (4,507,800) in view of Yoo et al. (US 6,385,328 B1), hereinafter Yoo.

**Claim 6:** Kelly discloses an electroacoustic transducer as claimed in claim 1, wherein the transducer has a pot-shaped housing (Figure 1). While Kelly does not specifically mention the size of the loudspeaker Kelly does not limit the size of the loudspeaker and the intent of Kelly is to minimize the size of the loudspeaker (Column 3 Lines 1 – 3).

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Yoo discloses a loudspeaker (see Figures 1a, b, c and 8) that has a pot shaped housing and is also substantially similar in structure to the loudspeaker disclosed by Kelly. Yoo discloses that the speaker can be made in the size range wherein, in the direction of the transducer axis, its height has a value between 2.0 mm and 5.0 mm and its diameter perpendicular to the direction of the transducer axis has a value between 6.0 mm and 20.0 mm (height of 4mm and diameter of 20mm, Yoo Column 2 Lines 12 – 13). Since the goal of Kelly is to minimize the size of the loudspeaker, it would have been obvious to one of ordinary skill in the art at the time of the invention that if desired the loudspeaker as disclosed by Kelly could be made the size of Yoo therefore allowing the loudspeaker to be used in smaller applications, for example portable electronics.

***Allowable Subject Matter***

8. Claims 2, 3, and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Claim 2:** An electroacoustic transducer as claimed in claim 1, but *does not disclose* wherein just one single circuit component is provided, which is formed by an integrated circuit connected to circuit frame, which integrated circuit forms the transducer circuit.

**Claim 3:** An electroacoustic transducer as claimed in claim 2, wherein the integrated circuit is embedded in a plastic jacket and wherein two connection contacts are

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provided on the plastic jacket, each of which connection contacts is connected to a moving-coil contact.

**Claim 4:** An electroacoustic transducer as claimed in claim 1, wherein four connecting contacts, each having the shape of an annular sector, are provided on a second carrier surface of the circuit frame which second carrier surface faces away from the membrane.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Saunders whose telephone number is (571)

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270-1063. The examiner can normally be reached on Monday - Thursday, 9:00 a.m. - 4:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
JS

January 11, 2007

  
**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**